DOCUMENT RESUME

ED 458 958 PS 029 916

AUTHOR	Wylie, Cathy
TITLE	Ten Years Old & Competent. The Fourth Stage of the Competent Children Project: A Summary of the Main Findings.
INSTITUTION	New Zealand Council for Educational Research, Wellington.
SPONS AGENCY	Ministry of Education, Wellington (New Zealand).
ISBN	ISBN-1-877293-02-4
PUB DATE	2001-00-00
NOTE	37p.; For the full report, see PS 029 915.
AVAILABLE FROM	NZCER Distribution Services, P.O. Box 3237, Wellington, New Zealand ($9.90 New Zealand). Tel: +64-(0)-4-384-7939; Fax: +64-(0)-4-384-7933; Web site: http://www.nzcer.org.nz.
PUB TYPE	Reports - Research (143)
EDRS PRICE	EDRS Price MF01 Plus Postage. PC Not Available from EDRS.
DESCRIPTORS	*Academic Achievement; Adult Child Relationship; Child Responsibility; *Children; *Competence; Curiosity; Early Childhood Education; Educational Experience; Family Environment; *Family Influence; Family School Relationship; Foreign Countries; Interpersonal Communication; Interpersonal Competence; Longitudinal Studies; *Peer Relationship; Persistence; Problem Solving; Psychomotor Skills; Sex Differences; *Student Interests; Student Motivation; Tables (Data); Teacher Attitudes; Well Being
IDENTIFIERS	*Competent Children Project (New Zealand); Ethnic Differences; Leisure Activities; New Zealand

ABSTRACT

The Competent Children Project is following a group of about 500 children in the Wellington region of New Zealand from around the age of 5 until they leave school. The main aims of the project are to describe children's progress over time and to chart contributions to their progress made by family resources, early childhood education, school experiences, children's interests and activities in the home or outside school, and peer relationships. The project focuses on 10 competencies important for well-being, school achievement and continued learning, and contributing to society and paid work: literacy, mathematics, logical problem solving, communication, curiosity, perseverance, social skills with children, social skills with adults, individual responsibility, and fine motor skills. Data have been collected at ages 5, 6, 8, and 10. Among the main findings detailed in this summary report are that most 10-year-olds were comfortable in their school environment, had very good attendance, were good at making and keeping friends, needed adult intervention to work with other children over a period of time, and had progressed in reading and problem solving. Children starting school with low competency were more likely to improve if their parents were highly educated or if their family had a high income, while high-achieving students maintained their achievement level. Other factors considered as possible contributions to children's performance were early childhood education experience, school and class characteristics, teacher perspectives, gender, parental education level, and family income. The report concludes by noting that what matters in children's progress is how children interact with adults and others and how they engage in activities, particularly those that use symbols and language. A list of publications available from the Competent Children's Project concludes the report. (KB)

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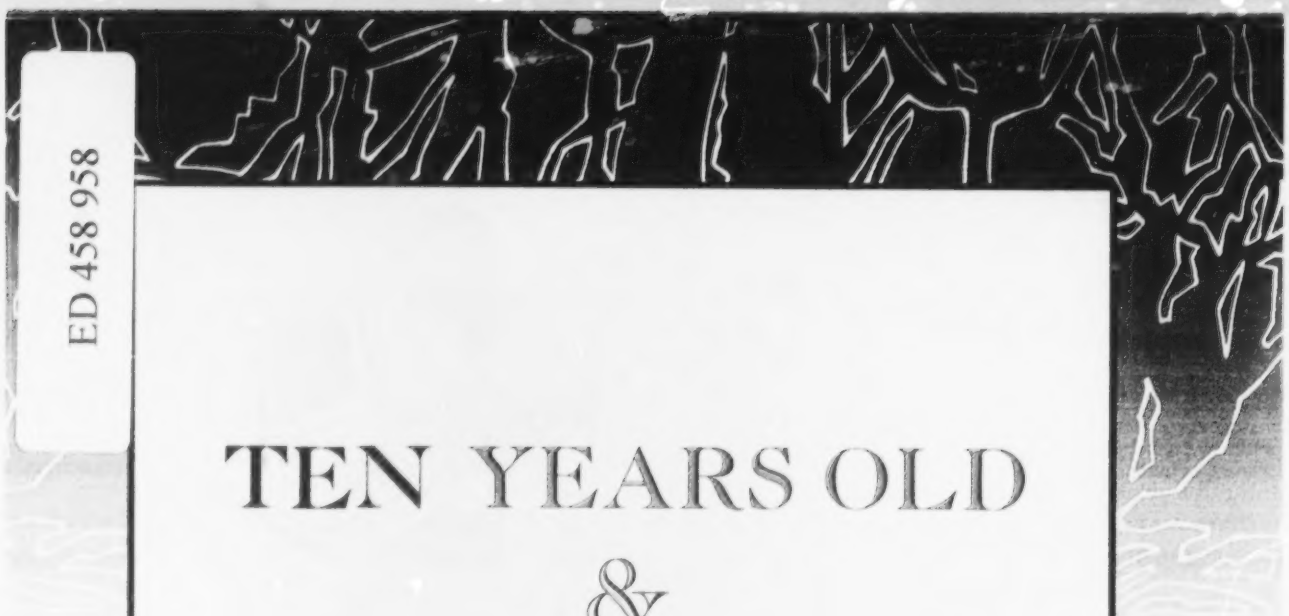

TEN YEARS OLD & COMPETENT

THE FOURTH STAGE OF THE COMPETENT CHILDREN PROJECT — A SUMMARY OF THE MAIN FINDINGS

CATHY WYLIE

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THE COMPETENT CHILDREN PROJECT:
A SUMMARY OF THE MAIN FINDINGS

CATHY WYLIE

NEW ZEALAND COUNCIL FOR EDUCATIONAL RESEARCH
Wellington 2001

New Zealand Council for Educational Research
PO Box 3237, Wellington, New Zealand

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ISBN 1-877293-02-4

Distributed by NZCER Distribution Services
PO Box 3237, Wellington, New Zealand
www.nzcer.org.nz

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What is the Competent Children Project?

The Competent Children project, funded by the Ministry of Education, is following a group of about 500 Wellington region children from around the age of 5, when they were still in early childhood education, until they leave school.[1]

The main aims of the project are to describe children's progress over time, and to chart the contributions to their progress that are made by some of the main experiences and elements in their lives: family resources, early childhood education, school experiences, children's interests and activities in the home or outside school, and their relations with their peers.

The competencies

For this project, we chose 10 different areas of competency which are important for children's own wellbeing, for school achievement and continued learning, and for taking part in society and paid work. These 10 areas of competency are:

- literacy (reading comprehension, vocabulary, writing)
- mathematics
- logical problem-solving
- communication
- curiosity

1 At age 5 and 6 the study included some 300 children; at age 8 we brought in some 200 children from a related parental survey done at the same time as our first stage of this research, when the children were also age 5.

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- ❒ perseverance
- ❒ social skills with other children
- ❒ social skills with adults
- ❒ individual responsibility (taking care of oneself)
- ❒ fine motor skills.

We were able to measure what children could do in these 10 areas by observing them at work or giving them specific tasks to do, then scoring how well they performed; or by asking the children's teachers, who had seen the children in action in their classrooms and in the school playground, to rate their approach to work and other people.

This stage of the project

The first three stages of the research looked at the children at ages 5, 6 and 8.[2] In this fourth stage, we measured the children's performance at age 10, when they were in their fifth school year. We compared the children's scores at age 10 with their scores at earlier ages.

We then looked at what might be making a difference to children's scores at age 10. Our analysis included some of the things children experienced at this age, such as their out-of-school activities, and their feelings about school and home. Because the study has followed the children over some five

2 Please see pp.35-36 for details of the Competent Children project's publications. The full report of the age 10 stage is *Competent Children at 10—Families, Early Education, and Schools*.(NZCER)

years, we were also able to look at the relationships of earlier experiences and resources to children's current competency levels. These included early childhood education, family income levels and changes in these over time, changes in families, how children initially took to school, and how they used their time, such as their use of mathematics in the home, or how long they spent watching television at age 5.

The Children at Age 10

Most of the study children at age 10 were comfortable in the school environment. They followed class routines without having to be reminded; they took responsibility for their own things; and they completed work, listened to teachers, and showed them respect. Most could follow conversations and stay on topic, pass on messages accurately, and usually understood the stories and instructions they heard from their teacher.

They continued to enjoy new experiences or challenges, to take an active interest in their surroundings, and to concentrate if working on something that interested them. Three-quarters of the children now finished all their work always, or most of the time, up from 65 percent at age 8. Around 10–15 percent of the children showed signs of unease in the school environment or with their peers; they scored 2 or less on the 1-5 scale used for teacher ratings.

Just over half the children never lost their temper with their peers at school, and were always included in games. Most

children were good at making and keeping friendships, and were unlikely to be led astray by peer pressure. However, though most children were working independently at school, they continued to need adult intervention: only 18 percent could always work with other children over an extended period of time without it (up from 12 percent at age 8). There were signs of growing confidence in solving issues with other children, but also signs that aggressive responses were becoming habitual for a small group of children.

Reading, writing and mathematics

On average, the study children showed a reading age of 10-10½ years on the PAT reading comprehension test. Teachers' estimates of their reading ages were somewhat higher – 11½-12 years. The children now recognised an average of 71 words out of the 110 on the Burt word recognition test, up from an average of 52 at age 8.

Writing scores increased from 63 percent at age 8 to 73 percent at age 10. Most children could write 15 or more lines about a favourite book or television programme. Around half made fewer than 5 spelling mistakes in their piece. More than half the children could write sentences which were correctly structured. However, 55 percent were still coming to grips with punctuation.

In mathematics, two-thirds or more of the children gave correct answers to questions focusing on numbers. Around half gave correct answers to questions focusing on equations.

Comparing children's performance at different ages

Children's performance on mathematics and literacy tasks at age 5, just before they started school, does give some indication of how well they might perform five years later, particularly if they performed very well or very poorly at age 5. But there is not a tight match between age 5 and age 10 scores.

School and home experiences between the ages of 5 and 10 do make a difference, as do earlier experiences and resources, before a child even reaches school. For example, children who started school with low literacy and mathematics scores were much more likely to improve their scores if their parents were highly educated, or if their family had a high income. Good quality early childhood education and experiences at home, or later out-of-school activities using language, symbols, and mathematics, also made improvement more likely.

There is a reasonably close match between age 8 and age 10 scores. The first three years of school are particularly important for children's long-term progress, especially for children from families with low parental education levels or low income.

However, children's social skills, communication, and attitudes to work seem to be more likely than mathematics and literacy knowledge and understanding to reflect their immediate interactions with teachers and peers, and to be more context-specific.

Children's Experiences and Competency Levels

Experiences of school

Most, 70 percent, of the children were reported by their parents to be enthusiastic about school. Another 13 percent were matter of fact – school was just a part of their daily routine; and 9 percent had mixed feelings about school. A small group, 4 percent, were unhappy with school, and another 3 percent had taken a while to settle but were now enjoying themselves, while 1 percent were bored.

Enjoyment of reading and writing was associated with enthusiasm about school, but enjoyment of working with numbers was not. Children from high income homes were more likely to be enthusiastic about school, but otherwise family characteristics made no difference in this respect.

Children who took a while to settle at school, or who were matter of fact (lukewarm) about school when they first started at age 5, had lower scores at age 10 than children who had started their school careers with enthusiasm, or who had been unhappy at first. Perhaps open unhappiness gives clear signals for additional adult intervention and support at the time when it is needed.

Most of the children saw school as a place for work, friendship, and enjoyment, and saw achievement reflecting their effort. They gave positive ratings for their school experiences. Children's school experiences have some bearing on their competency levels, particularly their experiences of:

- ❒ fair treatment,
- ❒ having interesting work, and
- ❒ keeping out of trouble.

Most children thought that working hard and learning something interesting were good indicators of progress at school, as were gains in knowledge and understanding. They were divided about whether comparisons with other children gave them a good indicator of how well they were learning.

Bullying and being bullied

Almost a third, 32 percent, of the children said they had been picked on or bullied in the last few months, usually at school. Two-thirds of the children who had been bullied mentioned verbal abuse, and 38 percent mentioned physical abuse. Boys were more likely to report physical bullying than girls, but reporting of verbal abuse was similar for both boys and girls. Responses to bullying were mainly divided between calling on an adult for help, or doing nothing and trying to ignore the incident.

Almost half those who bullied other children had been bullied themselves. We found that children who bullied tended to score lower on the competency measures than children who remained free from bullying, or who had been victims of bullying.

School attendance and mobility

A large majority, 93 percent, of the children in the Competent Children project sample had very good attendance records. Children whose attendance was poor or only satisfactory scored lower for perseverance and individual responsibility.

At age 10, 68 percent of the study children were still in the same school they started in; 23 percent were at their second school; and 7 percent were at their third school. Two percent had attended 4 or more schools by the time they had reached their fifth year of formal education. Children who had attended 4 or more schools by age 10 had lower scores for curiosity, communication, writing, and reading age.

Children's communication with their parents about school

Most, 79 percent, of the children thought their parents were interested in what they did at school. Some were unsure, or thought their parents were only interested sometimes. But only 1 percent felt their parents had no interest at all in their school life. Children who thought their parents were interested in school were more likely to talk to them about what happened at school.

Over half, 56 percent, of the children talked regularly to their parents about what they did at school, 36 percent did this sometimes, and only 7 percent said they never talked to their parents about school. But only a minority of children told their parents everything. Around half focused on schoolwork, and 30 percent on what happened in the playground. Ten percent told their parents only about the good things that happened to them.

Parental satisfaction and contact with their child's school

The majority of parents, 71 percent, were satisfied with their child's progress at school, 22 percent had mixed views, and 7 percent were dissatisfied. Parents' satisfaction with their child's

progress at school was unrelated to family characteristics, school decile or ownership, change of school between the ages of 8 and 10, or the number of schools attended since the child was 5. It was also unrelated to teacher views of their relationship with the child's parents and parental involvement in the school.

Parental satisfaction with their child's school progress was related to children's reports of their school experience, and their enjoyment of reading, writing, and mathematics (other than measuring). But half of those parents who were not satisfied with their child's progress at age 10 had children whom their teachers identified as having a very good or excellent level of achievement, compared with only 28 percent of those who were satisfied. This pattern is different from when the study children were aged 6 and 8; at those ages, parents who were not satisfied were more likely to have children whose achievement was not rated highly by teachers.

Almost half the parents were now talking regularly with their child's teacher—a considerable increase from the 11 percent who did so at age 8. Most parents, 89 percent, said that they were comfortable in talking to the child's teacher about their child. Only 2 percent were not, and another 7 percent were comfortable about some aspects, but not others.

Parents were less likely to work with their child's teacher to resolve problems encountered by their child at age 10 than two years earlier: 50 percent said they did this, compared with 65 percent at age 8. At age 10, children's happiness and social well-being were less likely to be raised by parents.

Almost half, 48 percent, of the teachers described their relationship with the child's parents as excellent or very good, and another 28 percent said they had a good relationship, while 12 percent said it was satisfactory. Only 1 percent felt they were on difficult terms with the child's parents. The overall picture was much the same as at age 8.

Teachers' views of their relationships with children's parents showed some association with their ratings of children's social and attitudinal competencies, but not so much with literacy and mathematics scores. Generally, children whose teachers felt they had a very good or excellent relationship with their parents scored highest, and those whose relationships were satisfactory or difficult, or where there was no relationship because the teacher had never met the parent, scored lowest. So it is important for a child's growth for there to be some positive relationship (and information sharing) between the two main groups of adults who share responsibility for the child.

Most parents, 93 percent, said they had some involvement with their child's school. The proportion of those who helped in classrooms halved between age 8 and age 10. This probably reflects the increased full-time employment of mothers over this period, the feelings of 10-year-olds about having parents in their class, and the growing amount of independent work that children were now capable of.

Patterns of child and parental experience of school, and parental satisfaction with their child's school, were not related to differences in the socio-economic area served by the school

(measured by school decile), or in ownership of the school (state, state-integrated, or independent).

Experiences at home

Most children in the study felt that home offered them interesting activities, and that their family supported them, and treated them fairly. Many children got bored sometimes, or told off. Most said they never felt lonely.

Some aspects of children's experiences at home are particularly related to their competency levels. Being treated fairly, and getting help when the child needed it, were related to higher scores for children. But always having to help at home was related to lower scores.

Reading

By age 10, according to parents, 77 percent of the children were using a dictionary at home, and 70 percent were using an encyclopaedia. A third of the children were reading teenage magazines, and 27 percent were reading teenage books. The kinds of reading linked with higher scores in the competencies were fiction, instructional material, and encyclopaedia use.

Over two-thirds, 69 percent, of the children were reported by their parents to enjoy reading, and 14 percent enjoyed it sometimes, but 17 percent did not enjoy it – a marked jump from 9 percent at age 8. Children were more likely to enjoy reading if they watched television for less than two hours a day. Enjoyment of reading was associated with higher scores for most of the competencies.

Most of the children, 83 percent, said they used a library. Children who used a public library every three weeks had higher scores than others.

Writing

According to parents, more children were writing factual reports at home at age 10, probably related to their homework, and more were keeping a diary. Imaginative writing, such as stories, poems or plays, stayed at much the same level as at age 8. Children who wrote at home had higher scores, particularly if their writing included reports, plays, poems, or word-puzzles.

Over half, 54 percent, enjoyed writing generally, and 20 percent enjoyed some writing activities. But 26 percent of the children did not enjoy writing at all, slightly up on 19 percent at age 8. Boys were only half as likely as girls to enjoy writing.

Enjoyment of writing was associated with higher literacy scores, and scores for the social and attitudinal competencies in the study. It was not related to scores for mathematics, logical problem-solving, and curiosity. Close to half, 47 percent, of the children enjoyed both reading and writing, and 11 percent enjoyed neither.

Mathematics

By age 10, more than 90 percent of the study children could add money correctly, use a calculator for simple addition or subtraction, and tell the time. Almost double the proportion at age 8 could do the times-tables up to 10, and use a calculator for simple multiplication or division.

The at-home mathematics activities associated with higher scores for children were adding money, working out fractions, and knowing times-tables. Playing card and board games had been positively associated with children's competency scores at earlier ages, but these no longer made a difference at age 10.

Most of the mathematics and literacy activities making a positive difference for children's scores were ones that many had been doing by age 8. So the findings of this project point to the importance of cumulative experience, and undertaking these activities earlier rather than later. At age 10, the children who lag behind others are the ones who have not become accustomed to using mathematics in their everyday life outside school.

While 68 percent of the children enjoyed using numbers, and 65 percent enjoyed using patterns, only 48 percent enjoyed measuring things. Enjoyment of numbers and patterns was linked with higher scores for all the competencies other than the literacy ones; but enjoyment of measuring was linked with only two, mathematics and curiosity.

Homework

All the children in the study had homework to do, and most had it regularly. Teachers reported that 72 percent of the study children always did their homework, 21 percent did it sometimes, but not always, and 7 percent did no homework.

Children who always completed their homework scored higher than others. Parents were more likely to see value in homework which extended children's understanding, such as project work

or mathematical problems, and spelling. Children were most likely to enjoy mathematics, art, or 'creative' homework.

Leisure activities

Children's main activities outside school remained the same as at age 8: watching television, physical play, and playing with other children. At age 10, 21 percent of the children mentioned video games, up from 4 percent at age 8.

By age 10, 84 percent of the children had joined a club or were taking part in some form of organised activity outside school. Just over half, 51 percent, of the children had lessons or coaching outside school, mostly in sports or performing arts, and 51 percent played a musical instrument, or sang in a choir. Children who took part in performing arts or music activities outside school tended to have higher scores. Sports involvement was positively associated with scores in mathematics and logical problem-solving.

Television watching

By age 10, children were watching television for an average of 2.2 hours a day, more than at ages 6 and 8. Previous television watching had almost as much bearing on children's competency scores as current watching. At ages 5 and 6, children who watched more than 2 hours a day on average tended to have lower mathematics and literacy scores than others. There are similar patterns for ages 8 and 10. Television takes time that could be spent more profitably, providing less of the kind of stimulus or uses of language and symbols which other activities make available to children.

How much time children spend watching television reflects how much time their parents spend watching. Large amounts of time spent watching each day by parents are also linked with lower competency scores for children.

Computer use

Most, 80 percent, of the study children's families had a computer at age 10, compared with 71 percent at age 8, and 57 percent at age 6. Only 10 percent of the children whose family had a computer made no use of it. The two main uses children made of computers were to play games (87 percent of those whose families had computers), and word-process (45 percent). Other main uses included accessing information from CD Roms, graphic software, and the internet.

Both current and previous family computer ownership were associated with higher scores for children. Computer activities associated with higher scores for children at age 10 were word-processing, the use of graphics, and the use of CD Roms.

Education and Children's Competency Levels at Age 10

Early childhood education

Early childhood education continued to play a part in children's performance five years after they had moved on to school. This is a powerful legacy. The aspects of early childhood education (ECE) which were particularly important were related to the quality of interaction between the children and their early childhood education teachers. Children's scores at age 10 were higher if the final early childhood education centre they attended had:

- staff who were responsive to individual children
- staff who asked open-ended questions of children
- staff who joined children's play
- staff who allowed children time to complete activities
- staff who guided children in the centre activities
- a variety of activities in different learning areas which children could choose from
- experiences of co-operative and supportive work with other children
- lots of printed material evident and used.

The centres which provided these key aspects of early childhood education quality were more likely to be those serving children from middle class families.

These findings on the enduring role of early childhood education in children's performance underline the importance of:

- having ECE staff who understand how to provide these key aspects of quality, and
- having quality available to all children, whatever their family income or their parents' qualifications.

School and class characteristics

Family income played a part in the kinds of school children attended, particularly in relation to the school's socio-economic decile rating, and type of ownership. However, on the whole this different pattern of access did not matter for the children's competency levels, with several important exceptions.

Children who attended decile 1-2 schools did score lower than others for the literacy measures and mathematics. Yet children in decile 3-4 schools scored as well as those in decile 9-10 schools. Children in decile 1-2 schools were less likely than others to report home activities and interests that would complement their work at school. Children who attended independent schools had higher scores on the reading measures. This probably indicates the greater emphasis on initial reading mastery in these schools.

Most of the study children could expect to be with the same classmates for the year, as 62 percent were in classes that had a student turnover of less than 5 percent. However, 11 percent of the children in decile 1–2 schools were in classes with a student turnover of 21 percent or more. Children in classes with a

turnover of more than 5 percent tended to have lower scores for mathematics, though this did not affect children whose mothers had a tertiary or university qualification.

Two-thirds of the teachers thought that the overall level of parental support in their classroom for children's schoolwork was very good or higher. Being in a class where parental support was rated highly by the teacher was associated with higher scores for three of the four literacy measures, and for logical problem-solving.

Teacher perspectives

Almost a third, 31 percent, of the children were seen by their teachers as having a very good or excellent overall achievement level; 29 percent were very good in some aspects of the curriculum, and average in others; 27 percent were average; and 13 percent were making slow progress. These overall assessments matched the children's scores on our competency measures pretty well.

These assessments were also linked to teachers' views of the children's classroom behaviour. The higher the level of achievement, the more likely it was that teachers would see children as mature, sensible, and providing leadership. But the lower the level of achievement, the more likely it was that teachers would see children as having poor self-esteem, being immature or easily led astray, being impatient, and living in their own world. They were also seen as more likely to be involved in bullying. Few of the very good/excellent achievers were seen

as having poor work habits. But they could be as passive, self-centred, or bossy as other children.

Children who were identified as slow achievers were generally struggling with most aspects of the curriculum, other than music, art, drama, and physical education. The very good/excellent achievers were more likely than others to have strengths in writing to convey information, science, social studies, problem-solving, spelling, and handwriting.

Problem-solving and information technology were identified as areas of curriculum strength for the first time in children's school lives. Only two curriculum areas showed steady increases between ages 6 and 10 in the proportion of children showing strengths in them: physical education and science. Between age 8 and age 10, reading, social studies, and technology showed increases in the proportion of children identified as showing strength in them. There was little change for the other curriculum areas, including mathematics and oral language.

The picture of children's classroom behaviour was much the same at age 10 as at age 8. This is consistent with our findings on the importance of the first few years of school for children's competency development. But fewer children were described as aggressive or unwilling to try things at age 10 than at age 8.

Teachers' views of children's strengths and weaknesses, and their overall performance, did not reflect any family characteristics such as parental education, income, family type or ethnicity. However, they did reflect gender differences.

Child and Family Characteristics and Children's Competency Levels at Age 10

Gender

There is currently much public and media interest in the comparative performances of boys and girls. We found that while girls tended to have higher scores than boys, the actual size of the gaps favouring girls is quite small. This is consistent with other reports of children's performance at this age.

Parents of boys had been less satisfied with their school progress when the children were aged 8. At age 10, this difference disappeared. Perhaps this reflects different expectations and tolerances of boys and girls. Teachers did see boys as struggling more with work habits, social skills, and maturity. Girls were more likely to undertake the kinds of interests and activities which were associated with higher scores for children at age 10, such as reading and taking part in the performing arts, and actually enjoying reading.

Parental qualifications

Children's performance in mathematics and literacy benefits from their parents' own education. In fact, parental education levels seem to matter more the longer children are at school, and they carry more weight than family income levels. At age 10, children whose mothers had left school without a

qualification had lower average scores than others, and children whose mothers had a university degree had higher average scores.[3]

Why does parents' education matter so much? One reason is that it is linked to different ways of spending time. The children in our study whose mothers had low levels of qualifications seemed more likely than others to have a narrower range of experience. They were less likely to use a public library, to belong to groups outside school, or to take part in music activities. These factors were all related to higher scores on our competency measures. On the other hand, these children were more likely to spend longer watching television, both at age 10 and at earlier ages. Children who regularly watched television for more than two hours a day tended to score lower than others.

Children with lower-qualified mothers were more likely than others to find school interesting. But they also found the work of school more challenging, perhaps because it was less related to their experiences before they came to school, and now to their experiences outside school.

3 We looked at mothers' qualifications only, since most of the parents we interviewed were mothers, particularly in one-parent families. We would expect paternal qualifications to show similar trends, though overseas research indicates that maternal education is more closely related to children's performance than paternal education, probably because in many families mothers spend more time with children.

Family income

Family income levels had risen for many of the children's families over the last five years, particularly for two-parent families, where both parents were in paid work. But family income levels five years previously had more bearing on children's competencies at age 10 than their current family income did.

Children whose family income was more than $60,000 at age 5 or younger continued to show higher scores for all the competencies at age 10. At the other end of the scale, children whose family income was below $30,000 at age 5 or younger continued to score lower than others on some competencies at age 10, regardless of whether their family income had improved. They had lower average scores for mathematics, PAT reading comprehension, and writing. Unfortunately, these are key areas both for schoolwork and for later employment.

Our analysis of why children in low income families have lower scores shows that it is not because of their attitudes or social skills. Their average scores on our measures for these (including perseverance, individual responsibility, and communication) are no different from those of children in middle income families. Low income levels seem to make a negative difference for children because low income families have lower levels of parental education, and fewer experiences and resources of the kind which use and extend language and mathematics use.

Other family factors

Children's competency levels at age 10 were largely unrelated to other family characteristics. Where we did find differences, they were usually underpinned by differences in parental education or family income.

Maternal employment

Before the study children started school, 19 percent of their mothers were in full-time paid employment, and 40 percent were in part-time or casual paid employment. At age 10, 32 percent of the children's mothers were in full-time employment, and 46 percent were in part-time employment (38 percent in part-time jobs, and 8 percent in casual jobs). Only 22 percent were not in paid employment of any kind.

There were no associations between current maternal employment and children's competency levels.

Income source

Wages or salary were the main sources of income for 56 percent of the study families. For 8 percent, the main income source was self-employment, and for 11 percent, income came from both wages and self-employment. Seventeen percent of the children's families received a state benefit as their main income source. Among families receiving a benefit, 45 percent also had some income from wages, up from 20 percent two years earlier. At age 10, children from families which had received a benefit for five years or more tended to score lower than others for social skills with peers, and individual responsibility.

Family type and stability

At age 10, 73 percent of the study children remained in their original two-parent families; 18 percent lived in one-parent families that had originally had two parents; and 7 percent lived in new two-parent families where one of the parents was not the biological parent. Just 2 percent of the children remained in their original one-parent families, and another 1 percent were cared for by their grandparents, another relative, or someone else who was not their parent.

Children in original one- and two-parent families experienced less change in their lives between ages 8 and 10 than other children. Two-parent families had higher average incomes than others. However, family type and changes in family type were not linked to children's competency levels.

Of those children who had a parent no longer living at home, 61 percent continued to have regular contact with their non-resident parent. Most of them got on well with this parent. Non-resident fathers were just as likely as fathers of children in original two-parent families to have had some contact with their child's teacher. (However, overall, only 61 percent of fathers had any contact with the teacher compared with 90 percent of mothers.)

Change in children's lives

By age 10, 65 percent of the study children had moved house at least once since they were born: 27 percent had moved house once, 28 percent between two and four times, and 10 percent

five or more times. Children from middle and high income families were more likely to have stayed in one place or moved only once. But moving house was not associated with any differences in children's competency levels.

Indeed, change in the children's lives did not affect their scores. Nor did being upset. About a third, 34 percent, of the parents identified something which was upsetting their child at age 10 (compared with 44 percent at near age 5, when some children were rather fearful about starting school). A third of the children who were upset by something were said to be coping well with it, 54 percent varied in their reaction, and only 13 percent of the children who were upset were not coping.

These findings are consistent with other longitudinal studies. Change and events that are not always pleasant are part of life. Children need support during times of transition and change, and when they are upset. It appears that most of the children in our study received this support.

There is a difference between a time of transition and what results from it. Parental separations and family changes are rarely easy. Yet there appears to be no long-term disadvantage associated with changes in family type for the performance of the children in the Competent Children project. The one-parent families in this study are not isolated, and meaningful contact with non-resident parents is maintained for most children. We are seeing some new dynamics in family life.

Ethnicity

While we found some differences in mathematics and literacy scores for children who came from different ethnic groups, most of these differences were reduced or were no longer significant once we took family income and maternal qualification into account. In other words, it is the resources available to children which matter to their progress, not their culture or ethnicity. On the whole, ethnicity was not related to children's reports of their school experience or what they did out of school.

Helping Children Make Progress

Following the Competent Children project children over five years shows quite clearly that there is no single ingredient or recipe which will guarantee that every child will be competent in all, or any, aspect of their life. What we learn from the children's progress and the roles played by different parts of their experience and support at different ages is that rather than look for a specific solution, such as a given amount of homework, or sport, or art, or a particular activity, what matters is:

- how children interact with adults and others, and
- how they engage in activities, particularly those that use symbols and language.

Four key strands in adult:child interactions

There appear to be four strands to ensuring supportive interactions between children and the adults who are responsible for their development—parents and teachers, both at early childhood education and at school:

- Adults are responsive to children – they know them as individuals, so they can feed and build on their interests and reactions, and respect them as individuals.
- Adults are warm.
- Adults are fair.
- Adults include some cognitive content in their interactions with children.

Children need engagement, rather than simply entertainment. Adults can help children by picking up on the things that interest the children in their care, and providing activities which are going to build their knowledge, extend their use of language and symbols, and require them to take an active rather than a passive role.

We know that children from families with low levels of family income and parental education face more hurdles than others. But from the findings of the Competent Children project, we also know that children from these homes can go over those hurdles when they also take part in activities and interactions which feed their use and enjoyment of literacy and mathematics, and of words, patterns and other symbols generally.

PUBLICATIONS FROM THE COMPETENT CHILDREN PROJECT

Competent Children at 5: Families and Early Education
Cathy Wylie, Jean Thompson, and Anne Kerslake Hendricks

The aim of this project is to discover what impact children's family resources and early childhood education experiences have on the development of their cognitive, social, communicative, and problem-solving competencies. This report is from the first phase of the longitudinal project. It describes the competencies of 307 children in the Wellington region, in the context of their family background, home activities, the length of their early childhood education experience, and the quality of their current early childhood experience as they neared 5 years of age.

NZCER 1996 **ISBN 1–877140–00–7** **Price: $29.70**
Cat. No. 13214

Five Years Old and Competent
Cathy Wylie

What makes a competent 5-year-old? This book gives a summary of the research report—*Competent Children at 5* (see above). It highlights the impact, shown in the research findings, of the children's family resources and early childhood experiences on the development of their cognitive, social, communicative, and problem-solving competencies. Thought-provoking and very readable.

NZCER 1996 **ISBN 1–877140–05–8** **Cat. No. 13217**
Price: $9.00

Competent Children at 6: Families, Early Education, and Schools
Cathy Wylie, Jean Thompson

The research findings of the second stage of the Competent Children are contained in this major research report. Among the findings are identification of main gains in competencies between age 5 and 6; competency level predictors; continuing effects of early childhood education; effect of class size; impact of home experiences, resources, and activities.

NZCER 1998 **ISBN 1–877140–41–4** **Price: $36.00**
Cat. No. 13250

Six Years Old and Competent
Cathy Wylie with Anne Else

A summary of the main report *Competent Children At 6: Families, Early Education, and Schools.* This part of the Competent Children study revisits the original group of 300 children, aged 6, after they have been at school for a year. How have the children's competencies changed? This booklet describes and analyses variations and changes in children's cognitive, social, communicative, and problem-solving competencies. It also examines the impact that children's early childhood education experiences, family resources, home activities, and school resources have on these competencies.

NZCER 1998 ISBN 1–877140–39–2 Cat. No. 13249
Price: $14.85

Competent Children at 8: Families, Early Education, and Schools
Cathy Wylie, Jean Thompson, Cathy Lythe

This report on the third phase of the Competent Children project has some exciting findings for early childhood educators about the value of their work. The research findings that the benefits for children of attending early childhood education are greater after 3 years than they were at the time. Aspects of early childhood education that are important for children's progress include the way educators work with children, and the opportunities they give them to select and complete activities. This report also contains valuable information on how children progress, and the activities, family resources, and school factors that can make a difference for them.

NZCER 1999 ISBN 1–877140–65–1 Cat. No. 13272
Price: $39.60

Eight Years Old and Competent
Cathy Wylie

This booklet is the summary of the major report *Competent Children at 8: Families, Early Education, and Schools.* (See above). There is valuable information on how children progress between ages 5 and 8, and the activities, family resources, and school factors that can make a difference for them.

NZCER 1999 ISBN 1–877140–65–X Cat. No. 13273
Price: $12.60

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The Competent Children project, funded by the Ministry of Education, follows a group of about 500 New Zealand children from around the age of 5, when they are still in early childhood education, through until they leave school.

The main aim is to explore whether home and education have different roles in the development of New Zealand children's competencies, and whether those roles change over time and as children have other experiences.

The project also aims to chart the differences in home and educational resources and experiences that exist for children, and the impact these differences can have for them.

The first stage of the research looked at the children at age 5, the second stage at age 6, and the third stage at age 8.

This booklet describes the fourth stage of the research, and returns to the children at age 10, when they were in their fifth year at school.

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